

data corresponding to input images, for controlling the manner in which the digitized image data is accessed from the image data files in the digital database and provided to an output of the apparatus for display on an image display device, said apparatus comprising:

a plurality of image memories for storing digitized image data read from the database;

user command means for registering user commands, including a particular read command to read and display a selected image data file from the database; and

control means responsive to the particular read command for reading the selected image data file and storing the corresponding digitized image data in one of the image memories for subsequent display on the display device, wherein said control means is further responsive to said particular read command for reading one or more image data files sequentially adjacent to the selected image data file and storing the corresponding one or more sequentially adjacent digitized image data in one or more of the remaining image memories.

38. An apparatus as recited in claim 37 wherein said selected image data file is output to the display device for display thereon.

39. An apparatus as recited in claim 38 wherein said user command means is utilized to enter a subsequent user command to read and to display a sequentially adjacent image file, whereby access time to display the sequentially adjacent image file is shortened because the sequentially adjacent image file has already been read from the database into one of said image memories.

"40. An apparatus as recited in claim 37¹⁰ wherein a plurality of sections are defined in the image display device and wherein said control means

associates the image data in the image memories with respective ones of the sections.

¹²~~41~~. An apparatus as recited in claim ¹¹~~40~~ wherein the image display device includes a television display having a two-dimensional array of pixels arranged in rows and columns; and wherein said control means defines sections of the image ^{display} reproduction device in terms of pixel rows and columns, and maps pixels of the image data in the respective memory devices to the respective sections of the array by row and column.

¹³~~42~~. An apparatus as recited in claim ¹²~~41~~ wherein the mapping performed by said control means includes decimating the image data.

¹⁴~~43~~. An apparatus as recited in claim ¹²~~41~~ wherein the mapping performed by said control means includes cropping the image data.

⁴⁴~~4~~. An apparatus according to claim 37, further comprising means for controllably generating border image signals representative of image characteristics of at least one border region to be combined with the image data, and for coupling the border image signals to the image display device, so that the image reproduced thereby is bound by the at least one border region.

⁴⁵~~4~~. An apparatus as recited in claim 37 wherein said control means further includes:

means for controllably reading image data files from the database in a first selected order; and
means for loading image data from the thus read image data files into respective ones of the plurality of image memories in a second selected order.

¹⁶~~46~~. An apparatus as recited in claim ^{57, 18}~~45~~ wherein said control means further includes:

means for arranging the image data files in the database into a predetermined sequence which

defines the selected order in which the image data files are to be read.

47. An apparatus, useful with a system including a digital database for storing image data files containing digitized images, for controlling the concurrent display of multiple still images on a display device coupled to an output thereof, said display device divided into a plurality of sections, said apparatus comprising:

a plurality of image memories for storing digitized images read from the database;

a user command device for registering a user command, including particular commands to read a plurality of specific image data files; and

a controller, responsive to said particular commands, for reading the specific image data files from the database, and for loading the specific image files into respective ones of the image memories, wherein said controller allocates images stored in said respective image memories to sections of the display device, and couples the allocated image data files to the output for connection to the display device.

48. An apparatus as recited in claim 47 wherein:

the display device includes a screen pixel array having pixels which are arranged in columns from an initial column to a final column, and rows which are arranged from an initial column to a final column; and

wherein said controller include means for defining the plurality of sections as having at least one of a subset of the rows of the screen pixel array and a subset of the columns of the screen pixel array, the subsets being defined in terms of the rows and columns.

49. An apparatus as recited in claim 48 wherein the controller further includes means for

mapping the image data stored in the image memories to respective sections of the screen pixel array.

50. An apparatus as recited in claim 49 wherein the means for mapping include means for decimating at least one of the rows and columns of the image data.

51. An apparatus as recited in claim 49 wherein the means for mapping include means for cropping the image.

52. An apparatus as recited in claim 49 wherein the means for mapping includes means for:

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mapping rows of image data to rows of screen pixels of the section and columns of image data to columns of screen pixels of the section, thereby orienting the image at a 0° angle to the screen;

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mapping rows of image data to columns of screen pixels of the section and columns of image data to rows of screen pixels of the section in reverse order, thereby orienting the image at a 90° angle to the screen;

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mapping rows of image data to rows of screen pixels of the section in reverse order and columns of image data to columns of screen pixels of the section in reverse order, thereby orienting the image at a 180° angle to the screen; and

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mapping rows of image data to columns of screen pixels of the section in reverse order and columns of image data to rows of screen pixels of the section, thereby orienting the image at a 270° angle to the screen.

53. An apparatus as recited in claim 47 wherein:

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the image data files stored in the database are arranged in a sequence for display;

the controller includes means, responsive to a first user command from said user command device for reading and displaying a first image, for reading a second one of the image data files having a position in the sequence adjacent to the position of the first image data file, and loading the second image data therefrom into a second one of the image memories; and

a¹ the controller further includes means, responsive to a second user command from said user command device for reading and displaying the second image, for displaying the image data for the second image in the second image memory, thereby avoiding a delay caused by the time required for reading the second image data file from the database and loading the second image data file into an image memory.

Please amend claims 19, 20, 23, and 33-35, as follows:

Sub C1 ² a² 19. (Once Amended) A method, for use with a digital image processing system including a digital database having a plurality of images digitized as image data and stored in respective image data files therein, a plurality of image memories, and an output for coupling thereto an image display device having a screen for display of images, for controlling the display of the images, the method comprising the steps of:

defining [at least one section of] the screen to contain a plurality of sections;

selecting a plurality of image data files;
reading image data from [at least one] the selected plurality of [the] image data files and
loading the image data into [at least one] respective image memories;

allocating at least one image memory containing image data to [the] at least one section of the screen, respectively; and

displaying the image data from the at least one image memory on the [at least one] respective screen section.

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20. (Once Amended) A method as recited in claim 19 wherein:

the screen includes a two-dimensional array of screen pixels arranged in rows and columns; and

the step of defining includes selecting [at least one] a plurality of subsets of the screen pixels, by row and column.

23. (Once Amended) A method as recited in claim 22 wherein the step of manipulating is carried out independently for each [of the at least one] image displayed on the [at least one] respective screen section.

33. (Once Amended) For use with a digitized image processing system in which digitized images are stored as digitized image data files in a digital database, an arrangement for controlling the manner in which digitized images are accessed from the image data files in the digital database and provided for display on an image reproduction device, comprising:

a remote control device for generating control signals for accessing a plurality of images stored in said digital database; and C

control means, responsive to signals generated by said remote control device, for causing a plurality of digitized images to be accessed from said digital database for display together on an image reproduction device, wherein said control means is responsive to signals generated by said remote control device for causing individual ones of a plurality of digitized images accessed from said digital database